CHAPTER 3

GENERAL OPERATIONS AND PROCEDURES OF THE NATIONAL WEATHER SERVICE HURRICANE CENTERS

3.1. General. This chapter describes the products, procedures, and communications headers used by the Tropical Prediction Center/National Hurricane Center (TPC/NHC) and the Central Pacific Hurricane Center (CPHC).

3.2. Products.

3.2.1. Tropical Weather Outlook (TWO). Tropical weather outlooks are prepared and issued by the TPC/NHC and CPHC during their respective hurricane seasons. The TPC/NHC writes TWOs for both the Atlantic and Eastern Pacific Basins. They are transmitted at 0530, 1130, 1730, and 2230 Eastern Local Time in the Atlantic and at 0400, 1000, 1600, and 2200 Pacific Local Time. In the Central Pacific, TWOs are transmitted by the CPHC at 0200, 0800, 1400, and 2000 UTC. The outlook briefly describes significant areas of disturbed weather and their potential for tropical cyclone development out to 48 hours. A tropical weather summary of Atlantic, Eastern Pacific, and Central Pacific tropical cyclone activity will be prepared and issued at the end of each month during the hurricane season.

3.2.2. Tropical Cyclone Discussion. The TPC/NHC and the CPHC will, as appropriate, issue tropical cyclone discussions on Atlantic, Eastern Pacific, and Central Pacific tropical cyclones at 0300, 0900, 1500, and 2100 UTC. Discussions will be disseminated for intergovernmental use only and will contain preliminary prognostic positions and maximum wind-speed forecasts up to 72 hours; will describe objective techniques, synoptic features, and climatology used; and will provide reasons for track changes.

3.2.3. Tropical Cyclone Public Advisories. Tropical cyclone public advisories are issued by the TPC/NHC for all tropical cyclones in the Atlantic. In the Eastern Pacific, tropical cyclone public advisories are issued by TPC/NHC for tropical cyclones that are expected to affect land within 48 hours. In the Central Pacific, tropical cyclone public advisories are issued by CPHC for all tropical cyclones within the area of responsibility. Scheduled tropical cyclone public advisories are issued at the same time scheduled tropical cyclone forecast/advisories are issued. Watch and warning break points are listed in Table 3-1. In the Western Pacific, public advisories are issued by the NWS Forecast Office, Tiyan, Guam, for all tropical cyclones within the Territory of Guam and Micronesia, using tropical cyclone forecasts/advisories prepared by the JTWC as guidance.

[NOTE: Tropical cyclone public advisories use statute miles for distance and miles per hour for speed. Nautical miles and knots may be added at the discretion of the centers.]

Table 3-1. Defining Points for Tropical Cyclone Watches/Warnings

La Pesca, MX
Rio San Fernando, MX
Brownsville, TX
Port Mansfield, TX
Baffin Bay, TX
Corpus Christi, TX
Port Aransas, TX
Port O'Connor, TX
Matagorda, TX
Sargent, TX
Freeport, TX
San Louis Pass, TX
High Island, TX
Sabine Pass, TX
Cameron, LA
Intracoastal City, LA
Morgan City, LA
Grand Isle, LA
Mouth of the Mississippi River, LA
Mouth of the Pearl River, LA
Pascagoula, MS
Pensacola, FL
Fort Walton Beach, FL
Destin, FL
Panama City, FL
Indian Point, FL
Apalachicola, FL
Ochlockonee River, FL
St. Marks, FL
Aucilla River, FL
Steinhatchee River, FL
Suwanee River, FL
Cedar Key, FL
Yankeetown, FL
Bayport, FL
Anclote Key, FL
Longboat Key, FL
Venice, FL
Boca Grande, FL
Fort Myers Beach, FL
Bonita Beach, FL
Everglades City, FL
East Cape Sable
Flamingo, FL
Dry Tortugas
Seven Mile Bridge, FL
Craig Key, FL
Angelfish Key, FL
Key Largo, FL
Florida City, FL
Golden Beach, FL
Hallandale, FL
Deerfield Beach, FL
Boca Raton, FL
Lake Worth, FL
Jupiter Inlet, FL
Stuart, FL
Fort Pierce, FL
Vero Beach, FL
Sebastian Inlet, FL
Cocoa Beach, FL
Titusville, FL
New Smyrna Beach, FL
Flagler Beach, FL
St. Augustine, FL
Fernandina Beach, FL
Brunswick (Altamaha Sound), GA
Savannah, GA
Edisto Beach, SC
South Santee River, SC
Murrells Inlet, SC
Little River Inlet, SC
Cape Fear, NC
Surf City, NC
New River Inlet, NC
Bogue Inlet, NC
Cape Lookout, NC
Ocracoke Inlet, NC
Cape Hatteras, NC
Oregon Inlet, NC
(The inclusion of Pamlico and Albemarle Sounds should be on a case-by-case basis.)
Currituck Beach Light, NC
NC/VA State line
Cape Charles Light, VA
Parramore Island, VA
Chincoteague, VA

Chesapeake Bay, New Point Comfort, VA
Chesapeake Bay, Windmill Point, VA
Chesapeake Bay, Smith Point, VA
Tidal Potomac, Cobb Island, MD
Tidal Potomac, Indian Head, MD
Chesapeake Bay, Drum Point, MD
Chesapeake Bay, North Beach, MD
Chesapeake Bay, Sandy Point, MD
Chesapeake Bay, Pooles Island, MD
Cape Henlopen, DE
Cape May, NJ
Great Egg Inlet, NJ
Little Egg Inlet, NJ
Manasquan Inlet, NJ
Delaware Bay north/south of East Point, NJ to Slaughter Beach, DE
Sandy Hook, NJ
Fire Island Inlet, Long Island (LI), NY
Moriches Inlet, LI, NY
Montauk Point, LI, NY
Port Jefferson Harbor, LI, NY
New Haven, CT
Watch Hill, RI
Point Judith, RI
Westport, MA
Woods Hole, MA
Chatham, MA
Plymouth, MA
Gloucester, MA
Merrimack River, MA
Portsmouth, NH
Portland, ME
Rockland, ME
Bar Harbor, ME
Eastport, ME

3.2.4. Tropical Cyclone Forecast/Advisories. Tropical cyclone forecast/advisories are issued by the TPC/NHC and the CPHC. See Section 4.3 for content and format of the advisories. In both the Atlantic and Pacific, the advisories are scheduled for 0300, 0900, 1500, and 2100 UTC. Pacific advisories should be transmitted 15 minutes before the effective time. In the Western Pacific, tropical cyclone forecasts/advisories are issued by the JTWC. Information on the broadcast of tropical cyclone information to coastal and high-seas shipping can be found in Chapter 8, Marine Weather Broadcasts.

3.2.5. Probability of Hurricane/Tropical Storm Conditions.

3.2.5.1. When Issued. The probability of hurricane/tropical storm conditions shall be issued in tabular form at regularly scheduled tropical cyclone public advisory and tropical cyclone forecast/advisory times, and when public advisories are issued. These probabilities will generally be carried for all named storms in the Atlantic Basin[1] within 72 hours of forecasted landfall. In addition, TPC/NHC may issue probabilities for tropical depressions forecast to become named storms and be a threat to land within 72 hours. When a tropical cyclone is forecast to track parallel to a coastline, maximum values over water points should be included, and the tropical cyclone public advisory should state that the highest probabilities are over water. The 72-hour cumulative probabilities of less than 5 percent are not included in the transmitted probability tables.

3.2.5.2. When Computed. The probabilities, which are based on the official forecast track, should be issued when the 72-hour forecast position approaches the coast and should be carried in advisories until the storm makes landfall. Two conditions in which probability information should not be issued are: (1) the hurricane/tropical storm has made landfall and is not expected to reemerge over water and/or (2) the computed probability values are not significant. TPC/NHC may discontinue issuance of probabilities earlier if other factors arise, such as difficulties with evacuation orders, etc. At the discretion of the hurricane forecaster, probabilities need not be listed for sites where the tropical storm or hurricane would likely be over land or less than tropical storm strength at the time it would affect the site. TPC/NHC may include a brief explanation of probabilities in the advisory.

These probabilities should be computed shortly after synoptic times for the 0-24, 24-36, 36-48, and 48-72 hours. A total probability for the next 72 hours should be shown in the last column and should represent a total of all forecast periods. The probability of the storm striking a coastal location within 48 hours may be determined by adding the 0-24, 24-36, and 36-48 hour probabilities. If the probability for a location is less than 1 percent, an "X" will be indicated in the table. If probabilities are not to be issued, a statement will be included in both the tropical cyclone public advisory and the tropical cyclone forecast/advisory. Refer to *Probability of Hurricane/Tropical Storm Conditions: A User's Manual* for further information.

[1] Atlantic Basin includes the Atlantic, Caribbean, and Gulf of Mexico

3.2.5.3. Locations. When appropriate, specific probabilities will be computed for the following locations:

Brownsville, TX
Corpus Christi, TX
Port O'Connor, TX
Galveston, TX
Port Arthur, TX
New Iberia, LA
New Orleans, LA
Buras, LA
Gulfport, MS
Mobile, AL
Pensacola, FL
Panama City, FL
Apalachicola, FL
St. Marks, FL
Cedar Key, FL
Tampa, FL
Venice, FL
Fort Myers, FL
Marco Island, FL
Key West, FL
Marathon, FL
Miami, FL
West Palm Beach, FL
29N 85W
29N 87W
28N 89W
28N 91W
Fort Pierce, FL
Cocoa Beach, FL
Daytona Beach, FL
Jacksonville, FL
Savannah, GA
Charleston, SC
Myrtle Beach, SC
Wilmington, NC
Morehead City, NC
Cape Hatteras, NC
Norfolk, VA
Ocean City, MD
Atlantic City, NJ
New York City, NY
Montauk Point, NY
Providence, RI
Nantucket, MA
Hyannis, MA
Boston, MA
Portland, ME
Bar Harbor, ME
Eastport, ME
28N 93W
28N 95W
27N 96W
25N 96W

Probabilities are not issued for the west coast of the continental United States, Hawaii, and the Territory of Guam and Micronesia.

3.2.6. Tropical Cyclone Updates. Tropical cyclone updates are brief statements in lieu of or preceding special forecasts to inform of significant changes in a tropical cyclone, or to post or cancel watches and warnings.

3.2.7. Atlantic and Gulf of Mexico Tropical Cyclone Position Estimates. The hurricane centers may issue a position estimate between scheduled advisories/forecasts whenever the storm center is within 200 nm of a U.S. land-based radar and sufficient and regular radar reports are available to the center. Position estimates disseminated to the public, DOD, and other Federal agencies will provide geographical positions in two ways: by latitude and longitude and by distance and direction from a well-known point.

3.2.8. Special Tropical Disturbance Statement. Special tropical disturbance statements may be issued to furnish information on strong formative, non-depression systems.

3.2.9. Storm Summaries. Storm summaries are written by the Hydrometeorological Prediction Center (HPC) after subtropical and tropical cyclones have moved inland and tropical cyclone public advisories and tropical cyclone forecast/advisories have been discontinued. Storm summaries shall continue to be numbered in sequence with tropical cyclone public advisories on named storms. Also, these summaries will reference the former storm's name and be issued as long as the remnants of the storm pose a serious hydrometeorological threat. As required, storm summaries will be issued four times daily at 0500, 1100, 1700, and 2300 UTC.

3.2.10. Tropical Weather Discussion. TPC/NHC issues these discussions four times a day. They describe significant features from the latest surface analysis and significant weather areas for the Gulf of Mexico, the Caribbean, and between the equator and 32°N in both the Atlantic and Eastern Pacific east of 140°W. Plain language is used.

3.2.11. Tropical Disturbance Rainfall Estimates. As required, the TPC/NHC/CPHC will issue satellite-based rainfall estimates for tropical disturbances and tropical cyclones within 36 hours of forecasted landfall.

3.2.12. Satellite Interpretation Message. CPHC issues these messages four times a day to describe synoptic features and significant weather areas. FAA contractions are used.

3.3. Designation of Tropical and Subtropical Cyclones.

3.3.1. Numbering of Tropical and Subtropical Depressions. The hurricane centers are responsible for numbering tropical and subtropical depressions in their areas of responsibility. Tropical depressions shall be numbered consecutively beginning each season with the spelled out number "ONE." For ease in differentiation, tropical depression numbers shall include the suffix "E" for Eastern Pacific, "C" for Central Pacific, or "W" for Western Pacific, after the number. In both the Atlantic and Pacific, once the depression has reached tropical storm strength, it shall be named and the depression number dropped, not to be used again until the following year.

3.3.1.1. Atlantic, Caribbean, and Gulf of Mexico. Depression numbers, ONE, TWO, THREE, will be assigned by the TPC/NHC after advising the Naval Atlantic Meteorology and Oceanography Center (NAVLANTMETOCCEN) Norfolk.

3.3.1.2. Pacific East of 140°W. Depression numbers, with the suffix E, e.g., ONE-E, TWO-E, THREE-E, will be assigned by the TPC/NHC after advising the Naval Pacific Meteorology and Oceanography Center (NAVPACMETOCCEN), Pearl Harbor. The assigned identifier shall be retained even if the depression passes into another warning area.

3.3.1.3. Pacific West of 140°W and East of 180°. Depression numbers, with suffix C; e.g., ONE-C, TWO-C, THREE-C, will be assigned by the CPHC after advising the NAVPACMETOCCEN, Pearl Harbor.

3.3.1.4. Pacific West of 180° and North of 0°. Depression numbers, with suffix W; e.g., ONE-W, TWO-W, THREE-W, are assigned by JTWC.

3.3.1.5. Subtropical Depressions. The numbering of subtropical cyclones shall follow the same procedure as above except a separate consecutive numbering sequence beginning with "ONE" shall be used for subtropical depressions and continues in effect if the system strengthens into a subtropical storm.

3.3.2. Naming of Tropical and Subtropical Storms and Hurricanes.

3.3.2.1. Atlantic and Eastern Pacific. Once the depression has reached tropical storm strength, it shall be named and the depression number will be dropped. If a subtropical cyclone becomes a tropical storm or hurricane, it receives the next available name in the tropical storm naming sequence. A different set of names will be used each year. After a set is used, it will drop to the end of the list to be used again in 6 years. Names of significant hurricanes will be retired and replaced. Lists of Atlantic and Eastern Pacific names are provided in Tables 3-2 and 3-3, respectively.

3.3.2.2. Central Pacific. When a tropical depression intensifies into a tropical storm or hurricane between 140°W and 180°, the depression number will be discontinued and replaced by an appropriate name. The CPHC will select the name from the list of Central Pacific names in Table 3-4. All of the names listed in each column, beginning with column 1, will be used before going on to the next column.

3.3.2.3. Western Pacific. For the Pacific west of 180°, tropical storms and typhoons are named by NAVPACMETOCCEN/JTWC. The names listed in Table 3-5 are for information only. Effective January 1, 2000, Table 3-5 will be replaced by Table 3-6 (International Tropical Cyclone Names for the Western Pacific and South China Sea).

3.4. Transfer of Warning Responsibility.

3.4.1. TPC/NHC to CPHC. When a tropical or subtropical cyclone approaches 140°W, the coordinated transfer of warning responsibility from TPC/NHC to CPHC will be made and the appropriate advisory issued.

3.4.2. CPHC to JTWC/(RSMC, Tokyo). When a tropical or subtropical cyclone crosses 180°from east to west, the coordinated transfer of warning responsibility from CPHC to NAVPACMETOCCEN/JTWC will be made and the appropriate advisory issued. At the same time, the CPHC will coordinate with the RSMC, Tokyo so that they are aware that CPHC will be suspending the issuance of advisories.

3.4.3. JTWC/(RSMC, Tokyo) to CPHC. When a tropical or subtropical cyclone crosses 180° from west to east, the coordinated transfer of warning responsibility from NAVPACMETOCCEN/JTWC to CPHC will be made. The NAVPACMETOCCEN/JTWC will append the statement, "Next advisory by CPHC-HNL" to their last advisory. At the same time, the CPHC will coordinate with RSMC, Tokyo so that they are aware that CPHC will be assuming the issuance of advisories.

Table 3-2. Atlantic Tropical Cyclone Names

1999		2000		2001	
ARLENE		ALBERTO	al-BAIR-to	ALLISON	
BRET		BERYL	BER-ril	BARRY	
CINDY		CHRIS		CHANTAL	shan-TAHL
DENNIS		DEBBY		DEAN	
EMILY		ERNESTO	er-NES-toe	ERIN	AIR-in
FLOYD		FLORENCE		FELIX	FEEL-ix
GERT		GORDON		GABRIELLE	gay-bree-EL
HARVEY		HELENE	he-LEEN	HUMBERTO	oom-BAIR-to
IRENE		ISAAC	EYE-sak	IRIS	EYE-ris
JOSE	ho-ZAY	JOYCE		JERRY	
KATRINA	ka-TREE-na	KEITH		KAREN	
LENNY		LESLIE		LORENZO	
MARIA	ma-REEH-ah	MICHAEL	MIKE-el	MICHELLE	
NATE		NADINE	nay-DEEN	NOEL	
OPHELIA	o-FEEL-ya	OSCAR		OLGA	
PHILIPPE	fe-LEEP	PATTY		PABLO	PA-blow
RITA		RAFAEL	ra-fa-EL	REBEKAH	
STAN		SANDY		SEBASTIEN	say-BAS-tyan
TAMMY		TONY		TANYA	TAHN-ya
VINCE		VALERIE		VAN	
WILMA		WILLIAM		WENDY	

2002		2003		2004	
ARTHUR		ANA		ALEX	
BERTHA	BUR-tha	BILL		BONNIE	
CRISTOBAL	CRIS-to-ball	CLAUDETTE	claw-DET	CHARLEY	
DOLLY		DANNY		DANIELLE	dan-YELL
EDOUARD	eh-DWARD	ERIKA	ERR-ree-ka	EARL	
FAY		FABIAN	FAY-bee-in	FRANCES	
GUSTAV	GOO-stahv	GRACE		GASTON	GAS-tone
HANNA		HENRI	ahn-REE	HERMINE	her-MEEN
ISIDORE	IS-i-door	ISABEL	IS-a-bell	IVAN	eye-van
JOSEPHINE	JO-ze-feen	JUAN	WAN	JEANNE	JEEN
KYLE		KATE		KARL	
LILI	LIL-ee	LARRY		LISA	LEE-sa
MARCO		MINDY		MATTHEW	
NANA	NAN-uh	NICHOLAS	NIK-o-las	NICOLE	ni-COLE
OMAR		ODETTE	o-DET	OTTO	
PALOMA	pa-LOW-ma	PETER		PAULA	
RENE	re-NAY	ROSE		RICHARD	RICH-erd
SALLY		SAM		SHARY	SHA-ree
TEDDY		TERESA	te-REE-sa	TOMAS	to-MAS
VICKY		VICTOR	VIC-ter	VIRGINIE	vir-JIN-ee
WILFRED		WANDA		WALTER	

If over 21 tropical cyclones occur in a year, the Greek alphabet will be used following the W-named cyclone.

Table 3-3. Eastern Pacific Tropical Cyclone Names

1999		2000		2001	
ADRIAN		ALETTA	ah LET ah	ADOLPH	
BEATRIZ	BEE a triz	BUD		BARBARA	
CALVIN		CARLOTTA		COSME	COS may
DORA		DANIEL		DALILA	
EUGENE		EMILIA	ee MILL ya	ERICK	
FERNANDA	fer NAN dah	FABIO	FAH bee o	FLOSSIE	
GREG		GILMA	GIL mah	GIL	
HILARY		HECTOR		HENRIETTE	hen ree ETT
IRWIN		ILEANA	ill ay AH nah	ISRAEL	
JOVA	HO vah	JOHN		JULIETTE	
KENNETH		KRISTY		KIKO	KEE ko
LIDIA		LANE		LORENA	low RAY na
MAX		MIRIAM		MANUEL	mahn WELL
NORMA		NORMAN		NARDA	
OTIS		OLIVIA		OCTAVE	AHK tave
PILAR		PAUL		PRISCILLA	
RAMON	rah MONE	ROSA		RAYMOND	
SELMA		SERGIO	SIR gee oh	SONIA	SONE yah
TODD		TARA		TICO	TEE koh
VERONICA		VICENTE	vee CEN tay	VELMA	
WILEY		WILLA		WALLIS	
XINA	ZEE nah	XAVIER	ZAY vier	XINA	ZEE nah
YORK		YOLANDA	yo LAHN da	YORK	
ZELDA	ZEL dah	ZEKE		ZELDA	ZEL dah

2002		2003		2004	
ALMA	AL mah	ANDRES	ahn DRASE	AGATHA	
BORIS		BLANCA	BLAHN kah	BLAS	
CRISTINA		CARLOS		CELIA	
DOUGLAS		DOLORES		DARBY	
ELIDA	ELL ee dah	ENRIQUE	anh REE kay	ESTELLE	
FAUSTO	FOW sto	FELICIA	fa LEE sha	FRANK	
GENEVIEVE		GUILLERMO	gee YER mo	GEORGETTE	
HERNAN	her NAHN	HILDA		HOWARD	
ISELLE	ee SELL	IGNACIO	eeg NAH cio	ISIS	EYE sis
JULIO	HOO lee o	JIMENA	he MAY na	JAVIER	ha VEE AIR
KENNA		KEVIN		KAY	
LOWELL		LINDA		LESTER	
MARIE		MARTY		MADELINE	
NORBERT		NORA		NEWTON	
ODILE	oh DEAL	OLAF	OH lahf	ORLENE	or LEAN
POLO		PATRICIA		PAINE	
RACHEL		RICK		ROSLYN	
SIMON		SANDRA		SEYMOUR	
TRUDY		TERRY		TINA	
VANCE		VIVIAN		VIRGIL	
WINNIE		WALDO		WINIFRED	
XAVIER	ZAY vier	XINA	ZEE nah	XAVIER	ZAY vier
YOLANDA	yo LAHN da	YORK		YOLANDA	yo LAHN da
ZEKE		ZELDA	ZEL dah	ZEKE	

If over 24 tropical cyclones occur in a year, the Greek alphabet will be used following ZEKE or ZELDA.

Table 3-4. Central Pacific Tropical Cyclone Names

COLUMN 1		COLUMN 2		COLUMN 3		COLUMN 4	
Name	Pronunciation	Name	Pronunciation	Name	Pronunciation	Name	Pronunciation
AKONI	ah-KOH-nee	AKA	AH-kah	ALIKA	ah-LEE-kah	ANA	AH-nah
EMA	EH-mah	EKEKA	eh-KEH-kak	ELE	EH-leh	ELA	EH-lah
HANA	HAH-nah	HALI	HAH-lee	HUKO	HOO-koh	HALOLA	hah-LOH-lah
IO	EE-oo	IOLANA	ee-OH-lah-nah	IOKE	ee-OH-keh	IUNE	ee-OO-neh
KELI	KEH-lee	KEONI	keh-ON-nee	KIKA	KEE-kah	KIMO	KEE-moh
LALA	LAH-lah	LI	LEE	LANA	LAH-nah	LOKE	LOH-keh
MOKE	MOH-keh	MELE	MEH-leh	MAKA	MAH-kah	MALIA	mah-LEE-ah
NELE	NEH-leh	NONA	NOH-nah	NEKI	NEH-kee	NIALA	nee-AH-lah
OKA	OH-kah	OLIWA	oh-LEE-vah	OLEKA	oh-LEH-kah	OKO	OH-koh
PEKE	PEH-keh	PAKA	PAH-kah	PENI	PEH-nee	PALI	PAH-lee
ULEKI	oo-LEH-kee	UPANA	oo-PAH-nah	ULIA	oo-LEE-ah	ULIKA	oo-LEE-kah
WILA	VEE-lah	WENE	WEH-neh	WALI	WAH-lee	WALAKA	wah-LAH-kah

NOTE: Use Column 1 list of names until exhausted before going to Column 2, etc. All letters in the H
language are pronounced, including double or triple vowels.

Table 3-5. Western Pacific Tropical Cyclone Names

COLUMN 1		COLUMN 2		COLUMN 3		COLUMN 4	
	Pronunciation		Pronunciation		Pronunciation		Pronunciation
ANGELA	AN-gel-ah	ABE	ABE	AMY	A-mee	AXEL	AX-ell
BRIAN	BRY-an	BECKY	BECK-ee	BRENDAN	BREN-dan	BOBBIE	BOB-ee
COLLEEN	COL-leen	CECIL	CEE-cil	CAITLIN	KATE-lin	CHUCK	CHUCK
DAN	DAN	DOT	DOT	DOUG	DUG	DEANNA	dee-AN-na
ELSIE	ELL-see	ED	ED	ELLIE	ELL-ee	ELI	EE-lye
FORREST	FOR-rest	FLO	FLO	FRED	FRED	FAYE	FAY
GAY	GAY	GENE	GEEN	GLADYS	GLAD-iss	GARY	GAR-ee
HUNT	HUNT	HATTIE	HAT-ee	HARRY	HAR-ee	HELEN	HELL-en
IRMA	IR-ma	IRA	EYE-ra	IVY	EYE-vee	IRVING	ER-ving
JACK	JACK	JEANA	JEAN-ah	JOEL	JOLE	JANIS	JAN-iss
KORYN	ko-RIN	KYLE	KYE-ell	KINNA	KIN-na	KENT	KENT
LEWIS	LOU-iss	LOLA	LOW-lah	LUKE	LUKE	LOIS	LOW-iss
MARIAN	MAH-rian	MANNY	MAN-ee	MELISSA	mel-LISS-ah	MARK	MARK
NATHAN	NAY-than	NELL	NELL	NAT	NAT	NINA	NEE-nah
OFELIA	oh-FEEL-ya	OWEN	OH-en	ORCHID	OR-kid	OSCAR	OS-car
PERCY	PURR-see	PAGE	PAGE	PAT	PAT	POLLY	PA-lee
ROBYN	ROB-in	RUSS	RUSS	RUTH	RUTH	RYAN	RYE-an
STEVE	STEEV	SHARON	SHAR-on	SETH	SETH	SIBYL	SIB-ill
TASHA	TA-sha	TIM	TIM	TERESA	teh-REE-sah	TED	TED
VERNON	VER-non	VANESSA	vah-NES-ah	VERNE	VERN	VAL	VAL
WINONA	wi-NO-nah	WALT	WALT	WILDA	WILL-dah	WARD	WARD
YANCY	YAN-see	YUNYA	YUNE-yah	YURI	YOUR-ee	YVETTE	ee-VET
ZOLA	ZO-lah	ZEKE	ZEEK	ZELDA	ZEE-dah	ZACK	ZACK

NOTE: Names will be assigned in rotation, alphabetically. When the last name in Column 4 (ZACK) h
used, the sequence will begin again with the first name in Column 1 (ANGELA). This table is valid th
1999 tropical cyclone season only--it will be superseded by Table 3-6.

Table 3-6. International Tropical Cyclone Names for the Western Pacific and South China Sea

	I	II	III	IV	V
Contributor	**NAME**	**NAME**	**NAME**	**NAME**	**NAME**
Cambodia	Damrey	Kong-rey	Nakri	Krovanh	Sarika
China	Longwang	Yutu	Fengshen	Dujuan	Haima
DPR Korea	Kirogi	Toraji	Kalmaegi	Maemi	Meari
HK, China	Kai-tak	Man-yi	Fung-wong	Choi-wan	Ma-on
Japan	Tembin	Usagi	Kammuri	Koppu	Tokage
Lao PDR	Bolaven	Pabuk	Phanfone	Ketsana	Nock-ten
Macau	Chanchu	Wutip	Vongfong	Parma	Muifa
Malaysia	Jelawat	Sepat	Rusa	Melor	Merbok
Micronesia	Ewiniar	Fitow	Sinlaku	Nepartak	Nanmadol
Philippines	Bilis	Danas	Hagupit	Lupit	Talas
RO Korea	Kaemi	Nari	Changmi	Sudal	Noru
Thailand	Prapiroon	Vipa	Megkhla	Nida	Kularb
U.S.A.	Maria	Francisco	Higos	Omais	Roke
Viet Nam	Saomai	Lekima	Bavi	Conson	Sonca
Cambodia	Bopha	Krosa	Maysak	Chanthu	Nesat
China	Wukong	Haiyan	Haishen	Dianmu	Haitang
DPR Korea	Sonamu	Podul	Pongsona	Mindulle	Nalgae
HK, China	Shanshan	Lingling	Yanyan	Tingting	Banyan
Japan	Yagi	Kajiki	Kujira	Kompasu	Washi
Lao PDR	Xangsane	Faxai	Chan-hom	Namtheun	Matsa
Macau	Bebinca	Vamei	Linfa	Malou	Sanvu
Malaysia	Rumbia	Tapah	Nangka	Meranti	Mawar
Micronesia	Soulik	Mitag	Soudelor	Rananim	Guchol
Philippines	Cimaron	Hagibis	Imbudo	Malakas	Talim
RO Korea	Chebi	Noguri	Koni	Megi	Nabi
Thailand	Durian	Ramasoon	Hanuman	Chaba	Khanun
U.S.A.	Utor	Chataan	Etau	Kodo	Vicente
Viet Nam	Trami	Halong	Vamco	Songda	Saola

NOTE: This will become the official international name list effective **January 1, 2000.** Names will be assigned in rotation starting with Damrey for the first tropical cyclone of the year 2000 which is of tropical storm strength or greater. When the last name in column 5 (Saola) is used, the sequence will begin again with the first name in column 1 (Damrey).

3.5. Alternate Warning Responsibilities.

3.5.1. Transfer to Alternate. In the event of impending or actual operational failure of a hurricane forecast center, tropical warning responsibilities will be transferred to an alternate facility in accordance with existing directives and retained there until resumption of responsibility can be made. Alternate facilities are as follows:

PRIMARY	ALTERNATE
TPC/NHC	National Centers for Environmental Prediction Hydrometeorological Prediction Center (HPC) Camp Springs, MD
CPHC	TPC/NHC
CARCAH	53rd Weather Reconnaissance Squadron (53 WRS)
JTWC	NAVPACMETOCCEN Yokosuka
NWSO Tiyan, Guam	CPHC

3.5.2. Notification. The NAVLANTMETOCCEN, Norfolk, and NAVPACMETOCCEN, Pearl Harbor, will be advised by TPC/NHC, CARCAH, and CPHC, as appropriate, of impending or actual transfer of responsibility by the most rapid means available. The JTWC will advise CPHC and TPC/NHC of impending or actual transfer of JTWC responsibilities. In the event of an operational failure of CARCAH, direct communication is authorized between 53 WRS and the forecast facility. Contact 53 WRS at DSN 597-2409/COM 601-377-2409 or through the Keesler AFB Command Post at DSN 597-4330/COM 601-377-4330 (ask for the 53 WRS).

3.6. Abbreviated Communications Headings. Abbreviated communications headings are assigned to advisories on tropical and subtropical cyclones and other advisories based on depression numbers or storm name and standard communication procedures.

[NOTE: An abbreviated heading consists of three groups with ONE space between each of the groups. The first group contains a data type indicator (e.g., WT for hurricane), a geographical indicator (e.g. NT for Atlantic Basin), and a number. The second group contains a location identifier of the message originator (e.g., KNHC for TPC/NHC). The third group is a date-time group in UTC. An example of a complete header is: WTNT31 KNHC 180400.]

Abbreviated communication headers for the areas of responsibility follow:

3.6.1. Atlantic.

ABNT20 KNHC	Tropical Weather Outlook
ABNT30 KNHC	Tropical Weather Summary (monthly)
WTNT41-45 KNHC	Tropical Cyclone Discussion
WTNT31-35 KNHC	Tropical Cyclone Public Advisory
WTNT21-25 KNHC	Tropical Cyclone Forecast/Advisory
WTNT71-75 KNHC	Tropical Cyclone Strike Probabilities
WTNT61 KNHC	Tropical Cyclone Update
WTNT51 KNHC	Tropical Cyclone Position Estimate
WONT41 KNHC	Special Tropical Disturbance Statement

3.6.2. Pacific.

3.6.2.1. Advisories. All advisories on hurricanes, tropical storms, and depressions are under WT abbreviated headings, as follows:

ABPZ30 KNHC	Tropical Weather Outlook
ABPA30 PHNL	Tropical Weather Summary (monthly)
TYPS10 PHNL	Southern Hemisphere Tropical Cyclone Summary
WTPZ21-25 KNHC	Tropical Cyclone Forecast/Advisory
WTPA21-25 PHNL	Tropical Cyclone Forecast/Advisory
WTPZ31-35 KNHC	Tropical Cyclone Public Advisory
WTPA31-35 PHNL	Tropical Cyclone Public Advisory
WTPQ31-35 PGUM	Tropical Cyclone Public Advisory

3.6.2.2. Numbering. Depressions are numbered internally and storms are named internally, but the number in the abbreviated headings does not relate to either the internal number of the depression or the name of the storm. The first cyclone would have 21 and 31 in the abbreviated headings, the second cyclone would have 22 and 32, the sixth cyclone would have 21 and 31, etc. The abbreviated heading would not change when a depression was upgraded to storm status.

ABPA20 PHNL	Tropical Weather Summary (monthly)
ABPZ20 KNHC	Tropical Weather Outlook
WTPZ41-45 KNHC	Tropical Cyclone Discussion
WTPA41-45 PHNL	Tropical Cyclone Discussion
WTPZ51 KNHC	Tropical Cyclone Position Estimate
WTPA51 PHNL	Tropical Cyclone Position Estimate
WTPQ51-55 PGUM	Tropical Cyclone Position Estimate
WTPZ61 KNHC	Tropical Cyclone Update
WTPA61 PHNL	Tropical Cyclone Update
WOPZ41 KNHC	Special Tropical Disturbance Statement
WOPA41 PHNL	Special Tropical Disturbance Statement
FXUS01 KWBC	1-2 Day Discussion
FXUS02 KWBC	3-5 Day Forecast
FXUS04 KWBC	Precipitation Discussion